

PTC® Live Global

CUST 326- Off the Beaten Track with PTC Integrity Lifecycle Manager User Interfaces and Reporting

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Project Manager Business Applications

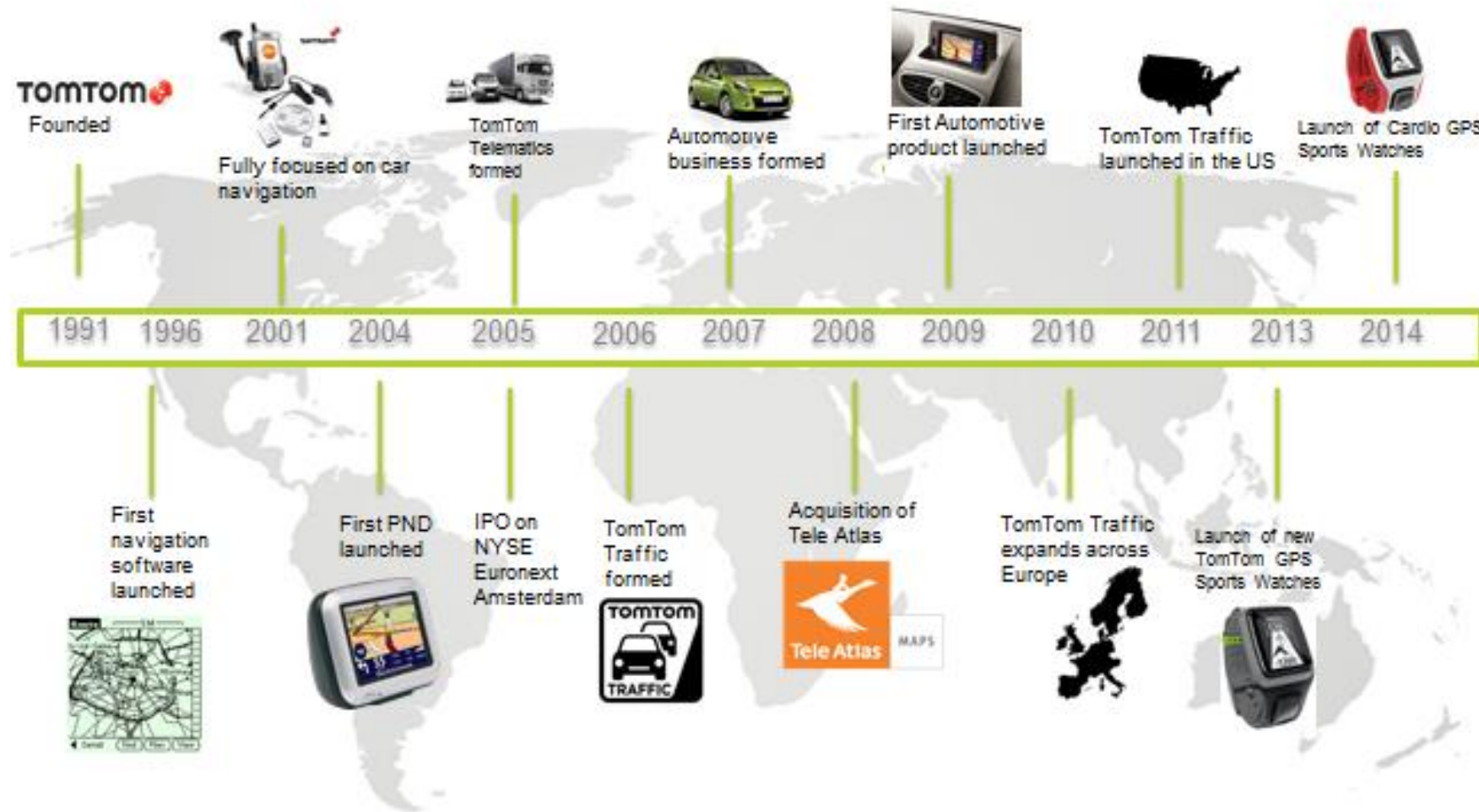
June 10th, 2015



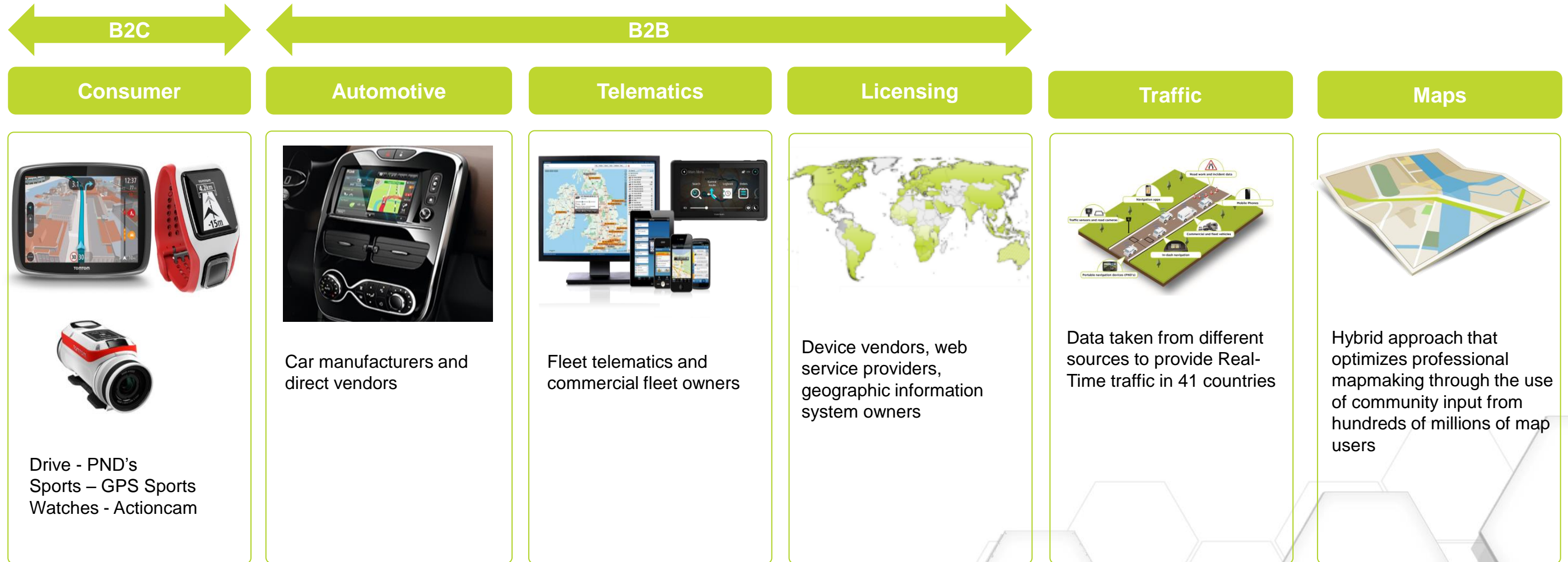
- Tomtom
- Why PTC Integrity Lifecycle Manager
- Statistics
- Milestones
- Frameworks
- Concepts
 - Dynamic upload
 - (web) (historic) reporting
 - Custom web interfaces
 - Interfacing (Map Share, Jira, Salesforce ,Rally, ...)
 - Migrations
- What's next
- Questions & Answers



History



Business Structure



Why PTC Lifecycle Manager

- **Requirements**
 - QMS ISO TS Automotive
 - one central database for global audience
 - customizable (in house)
 - interfaces with other tools (Salesforce, Jira, Customer Feedback Loop, eDelivery, ...)
 - reporting
 - helps in global standardization
 - allows you to have local flavors
- **Meet expectations of the diverse user profiles**

Occasional
query



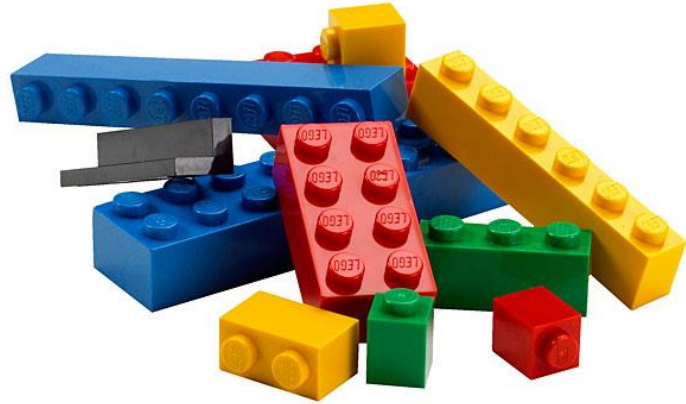
Frequent
update



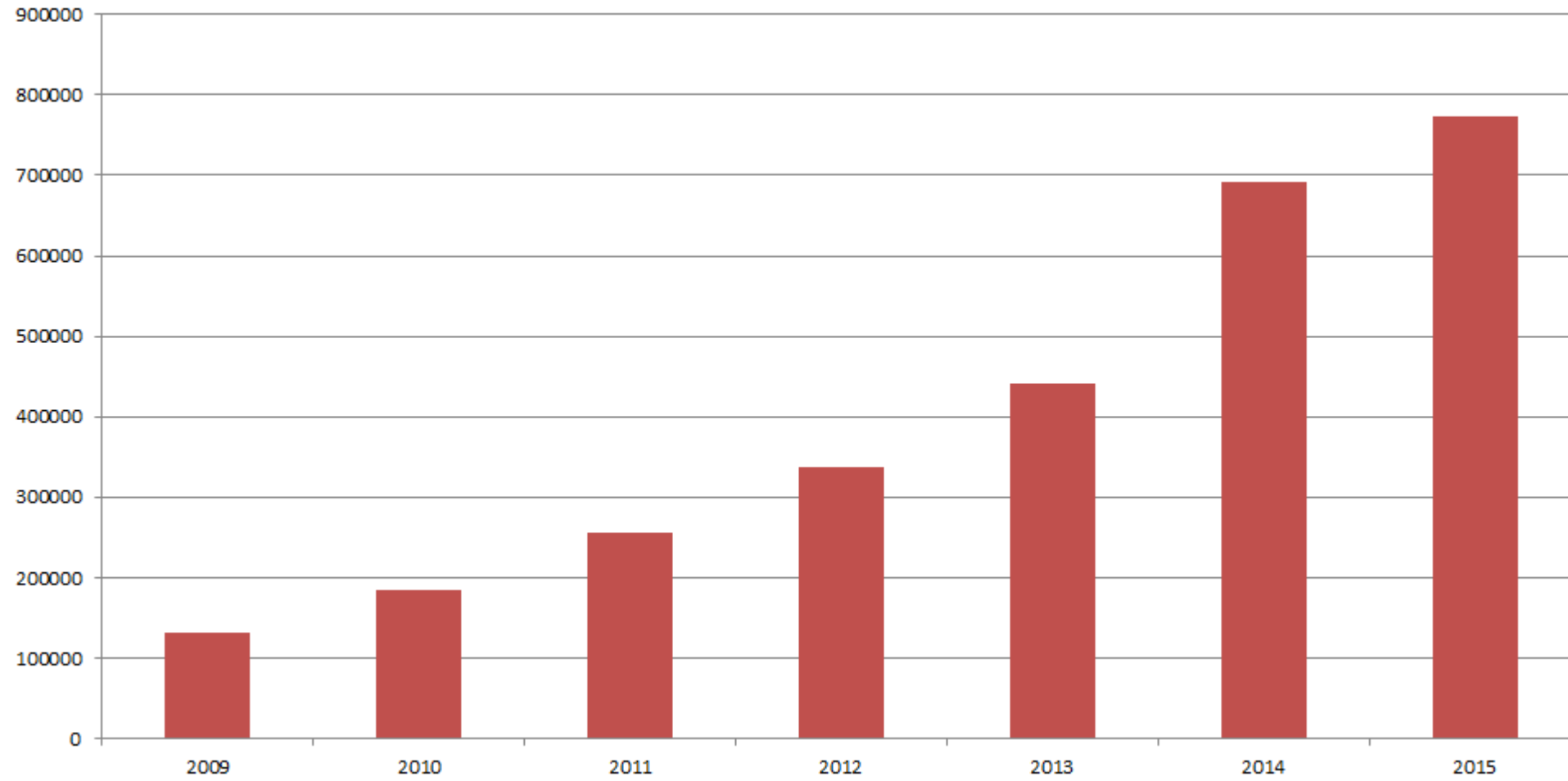
Why PTC Lifecycle Manager

PTC Integrity Lifecycle Manager

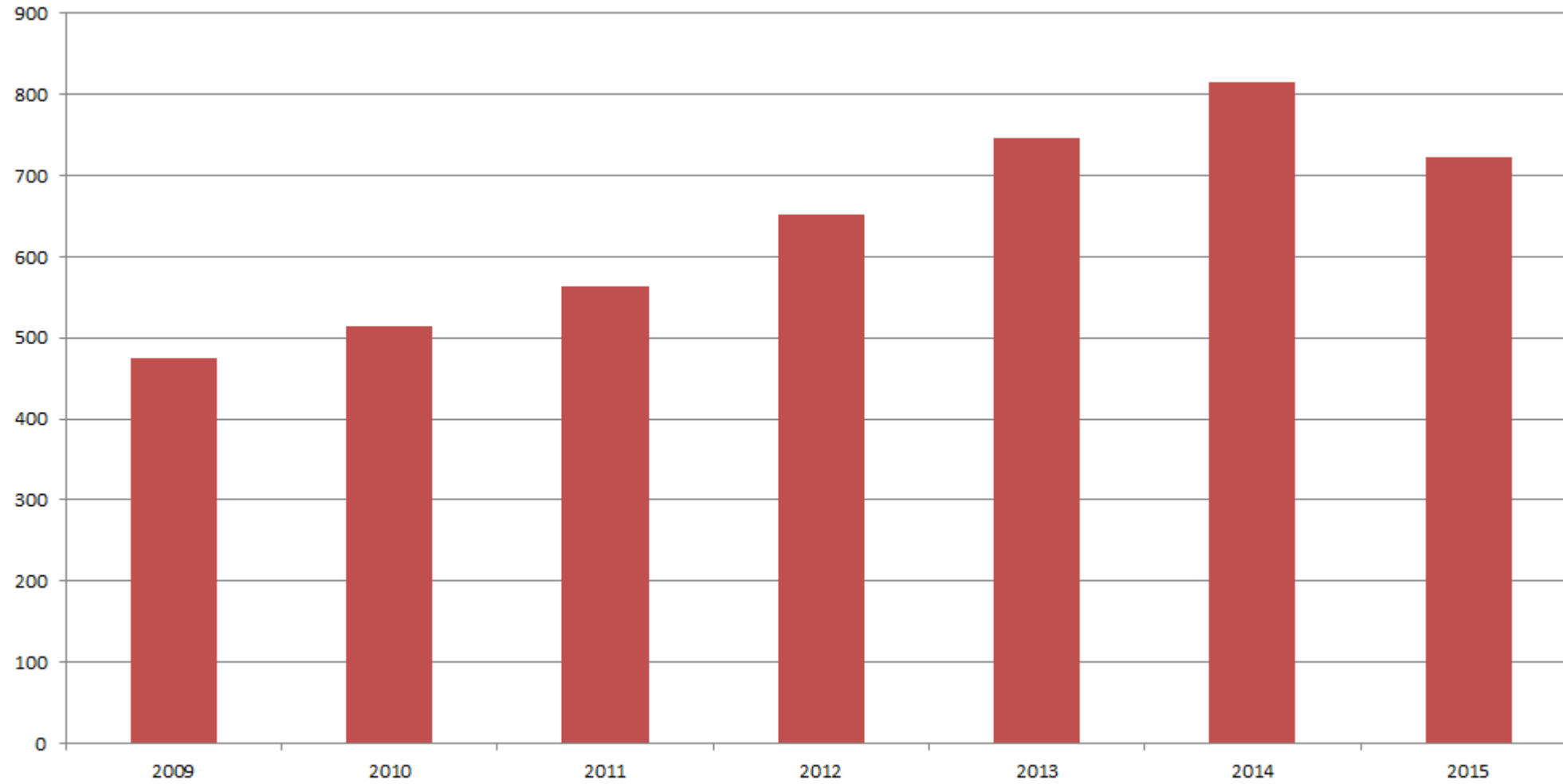
Other



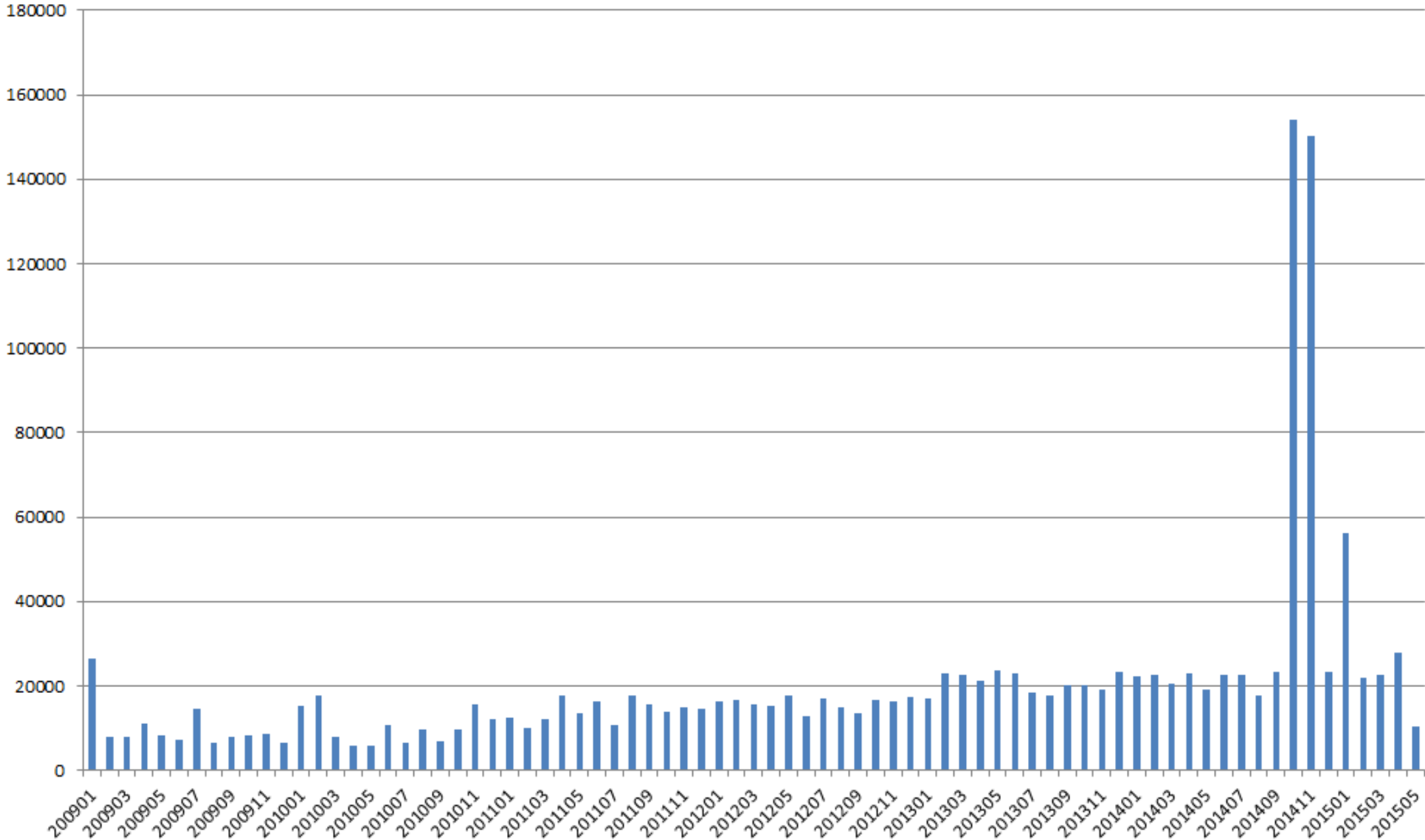
Records created per month (Cumulative)



Unique created-by users



Unique records modified per month



Server hardware

- **Application server**
 - Dell PowerEdge R420TPM
 - RAM : 16GB
- **Database Server**
 - Oracle RAC (Real Application Clusters)
 - 2x SUN BLADE X8440 SERVER MODULE
 - RAM : 64GB

• **99.99% up time**

• **1.5 FTE**



- **Prior 2010**
 - 2005 Application lifecycle management
 - 2008 Application Lifecycle Management -> any Lifecycle Management
 - 2009 Product Releases, Database Releases
- **2010**
 - MKS upgrade 2007 -> 2009 (->Agile methodology)
 - Accept 360 migration
- **2011**
 - 8D Nonconformity process (Siebel migration)
 - Web based Reporting
 - Dynamic Content (Product Release Checklist)
- **2012**
 - Launch of the Supplier Framework
 - Launch of the Audit Framework
 - Control Plan checks (dynamic content)
 - Web based interfaces
 - Launch of Jira – MKS connector



- 2013
 - Launch of Validation process (part of Engineering Framework)
 - Extension of Supplier Framework
 - Introduction of Risk Management
 - Introduction of CCF/Approvals
 - Link with Salesforce
- 2014
 - Goldmine migration + Supplier Management interface
 - Watchdog/Watch the dog
 - Re-Vitalize SCRUM/Agile with SAFe (Scaled Agile Framework)
- 2015
 - Redesign Database Release Process (from Quarterly releases to real-time)
 - Rally connector

Quality Framework

Risk & Issue Management
Nonconformity handling (8D methodology)
Content Creation Framework & Approval process

Product Line/Planning Framework

Customer Requests
Business Requirements

Engineering Framework

Agile methodology
Software Releases

Operations Framework

Database releases
Database projects

Product Create Framework

Product releases
Checklists

Audit Framework

All internal, external audits, inspections, ...
All Product Audits

Supplier Management Framework

All suppliers
Supplier related Business sProcesses

	Quality Framework	Product Line/Planning Framework	Engineering Framework	Operations Framework	Product Create Framework	Audit Framework	Supplier Management Framework
Quality Framework							
Product Line/Planning Framework	A nonconformity might lead to a Business Requirement						
Engineering Framework	A quality issue might lead to a bugfix	A Business Requirement might lead to software development					
Operations Framework	A gate needs to be passed when a database gets release	A Business Requirement Feasibility might impact Database Planning	A Database feature might involve Engineering Effort				
Product Create Framework	Approvals from all stakeholders are needed before we can release a product	A Business Requirement Feasibility might impact Product Release Planning	A Product feature might involve Engineering Effort	Database Planning and Product Planning are aligned			
Audit Framework	An Audit finding might lead to a Nonconformity		Internal Audits might trigger a review of Engineering Processes	Opportunity for Improvement might trigger a review of Database Processes	Internal Audits might trigger a review of Productizing Processes		
Supplier Management Framework	A Nonconformity root cause might lead to a supplier			Sources delivered by Suppliers are input for our Databases		Suppliers with low scores will be audited	



Dynamic upload + follow-up

- **Use case:**

- In our process we make use of custom checklists (Project Release, Database Release, Product Release, ...)
- End users maintain the checks themselves, no admin bottlenecks
- Track progress
- Before : Excel/Access/... used for follow-up -> not a controlled way to manage data (cfr ISO/TS)

- **Solution/Approach:**

- Web interface to manage configuration (which checks for which region and who is responsible)
- Web interface to prepare the upload (ad hoc changes/overrule defaults/correct existing checklists)
- Web interface to populate checklists + additional features
 - ease of use (UI experience)
 - Show my checks vs others
 - Show help
 - Combine actions (eg close current check and create new item)
 - Allow next check if previous is finished
 - ...

(web) (historical) reporting

- Use case

- Classic PTC reporting interface has limited functionalities (eg input = query)
- Reporting requirements are complex (historic, compare calculation methods, n levels, forecasting, output formats, ...)
- Third party reporting tools do not bring added value
- Historic data is not accessible in reporting engine

- 16M + historical records (for 800k records)

- Solution/approach

- Develop our own reporting library
- Added Retro Webservice calls
 - What was the value at a given date
 - What was the date for a given value
- We can make any report (complexity, visualization, ...)
- KPI (key performance indicator) / CTQ (critical to quality)
- Notifications/reminders
- Watchdogs



Custom web interfaces

- **Use case**

- Classic interface has limited UI controls (eg no buttons, ...)
- Classic interface can only visualize 1 level deeper
- Classic interface forces overhead (eg calculated field (days between dates, hyperlinks fields,...))
- Classic interface demands a lot of clicking (eg create new related item (push edit/push create/confirm type/push Ok vs button New <item>))
- Classic query lacks functionality (eg compare fieldvalue with fieldvalue)
- Classic query cannot look +1 levels deep

- **Approach/Solution**

- Combining client side web technology and server side webservices we can create custom screens that help/assist the user in managing their data
- Business Logic is kept/developed in PTC Integrity LM
- Examples
 - Supplier MGMT -> 1 screen
 - Manage checklists -> 1 screen (loose focus updates value)

Interfacing (Mapshare, Jira, Salesforce , Rally...)

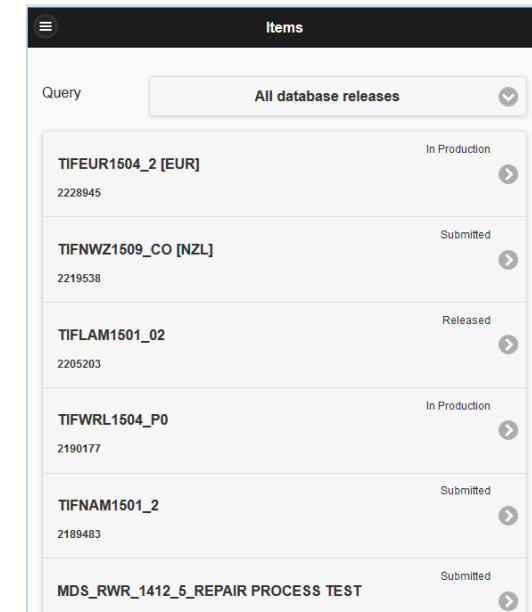
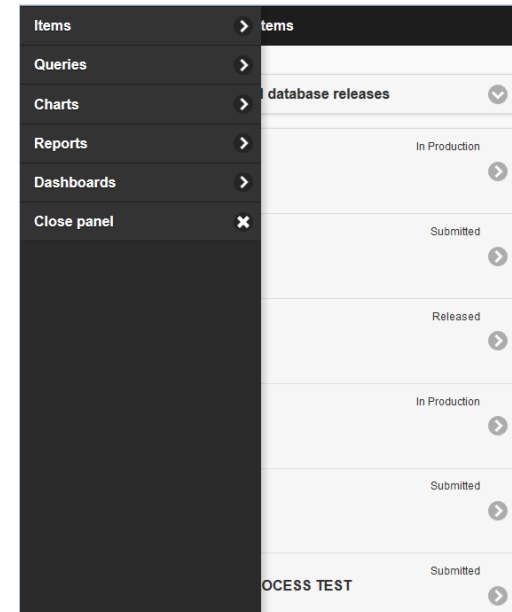
- **Use case**
 - PTC Integrity LM needs to exchange data with other software systems (Jira/Salesforce/Rally/...)
- **Solution/Approach**
 - Interfacing
 - Jira :
 - fully customizable 'realtime' two way interface
 - Highly configurable mapping
 - Salesforce :
 - 2 way interface (not customizable)
 - Data comes in – conclusions go out
 - Rally :
 - One way interface (Business Requirement – Portfolio Feature)
 - Map Share (*) :
 - Reported Maps errors (by end users) can become Quality Items in PTC Integrity LM

(*) Map Share technology allows you to make changes to the map on your navigation device or to report map changes online, depending on the model of navigation device. These changes instantly improve your routing and they can also be shared with the Map Share community of 21 million people.

PTC Integrity Lifecycle Management allows Tomtom to optimize the software cost by means of migrating

- **Accept 360 (Product Planning Tool):**
 - Too complex vs requirements
 - Hosted solution ('disconnected' from other sources)
- **Siebel:**
 - Was able to track quality issues
 - Request to introduce Nonconformity handling
 - Failed attempt to model 8D in Siebel
- **Goldmine (Supplier Management):**
 - 3rd party software reached end of life
 - 10years of user experience, users' (80+) buy-in was very important
 - 3-step web interface approach
 - Goldmine DB → Web Interface (designed by users)
 - Migrate Active Goldmine DB → PTC ILM
 - Web Interface → PTC ILM (+ access to Archived Goldmine DB)

- Upgrade to 10.6 (including server hardware upgrade)
- Mobile interface
- Integration with Sharepoint (portal for external)
- FMEA framework
- Reality feedback
- Jira skin
- Watch the dog
- Project Management interface



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